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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/533,471	03/23/2000	David Randolph Smith	TH-1354(US)	9903

7590 10/20/2003

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Houston, TX 77252-2463

EXAMINER

THOMAS, COURTNEY D

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/533,471

Applicant(s) *NCC*

SMITH, DAVID RANDOLPH

Examiner

Courtney Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

1. The drawings are objected to because the electrical motor and center rotor do not possess corresponding numbers in Fig.1. Examiner notes that the specification identifies both the electrical motor (*) and center rotor (*), along with stator (2). In particular, for a full understanding of what applicant considers a motor system, these elements should be identified for quick and easy reference as described by the specification (see p. 4, lines 17-23). Examiner further notes that the rotation of center rotor (i.e. arrows highlighting rotation direction) should also be illustrated, since this feature is described within the specification (see p. 4, lines 22-23). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because (i.e. "means" and "comprising").

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by McClain et al. (U.S. Patent 4,370,098).

[37]

ABSTRACT

Disclosed are a method and system for monitoring and controlling the normally inaccessible dynamic operating conditions, such as well fluid head and motor terminal voltage, of a well pumping operation, in response to monitored conditions at the top of the well. At the heart of the system is a computer having stored therein, coded data representative of the fixed well, motor, and pump characteristics and programs defining the mathematical relationship between the stored fixed data, dynamic operating conditions of interest, and the monitored conditions. Feedback control for regulating the well fluid head and motor terminal voltage include the computer and uniquely designed frequency converter and line drop compensator apparatus.

5.

Abstract – U.S. Patent 4,370,098 to McClain et al.

6. As per claims 1, 5, 9 and 10, McClain et al. disclose a process (and apparatus) for measuring and monitoring motor systems (Abstract - shown above; column 1, lines 50-63) said process comprising: providing a motor system having at least one component selected from a stator and an armature (5; column 1, lines 25-33), said at least one component connected to at least one electrical wire (6, column 14, lines 61-68); incorporating at least one means for data measurement with said at least one electrical wire (16-18); connecting said at least one means for data measurement with said at least one motor component (Fig. 1 - not shown above); collecting

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data with said at least one means for data measurement (column 4, lines 25-38); and transferring said collected data to a data collection station (12).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-4, 6-8 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClain et al. (U.S. Patent 4,370,098).

9. **As per claims 2-4, 6-8 and 11-12**, McClain et al. do not explicitly disclose a process wherein a) means for measuring data is wrapped around the electrical wire b) means for measuring data is encapsulated and attached to the electrical wire by covering or coating the electrical wire and the means for measuring data with an insulating material, and c) means for measuring data is selected from optic fibers, sensors, micro-machines and combinations thereof. However, McClain et al. teach a process for measuring and monitoring motor systems, in particular motor systems operating in remotely inaccessible locations (Abstract; column 1, lines 50-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of fiber optic cables, wave guides, etc., or other functionally equivalent means since it is known in the art that fiber optic cables can be used to transfer information from relatively inaccessible / hazardous locations to a corresponding receiving unit. Cables (optical, electrical, etc.) are known to require protective coating/ insulation

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in order to ensure optimum transmission of signals and serve to prevent the creation of hazardous conditions to users and or linking system components.

10. **As per claims 6-9**, McClain et al. do not explicitly disclose the arrangement of measuring means contained within a tube or wherein the tube is wound in a motor stator with electrical wire. Additionally, McClain et al. do not explicitly disclose the composition of measuring means selected from optic fibers, sensors, micro-machines and combinations thereof. However, McClain et al. teach a process for measuring and monitoring motor systems, in particular motor systems operating in remotely inaccessible locations (i.e. abstract, column 1, lines 50-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of fiber optic cables, wave guides, etc., or other functionally equivalent means since it is known in the art that fiber optic cables can be used to transfer information from relatively inaccessible/hazardous locations to a corresponding receiving unit. Cables (optical, electrical, etc.) are known to require protective coating/ insulation in order to ensure optimum transmission of signals and serve to prevent the creation of hazardous conditions to users and or linking system components. Additionally, it would have been obvious to arrange a measuring means, such as an optical fiber in such a manner as to be integral with a motor system, so that it is non obstructive to other components and is securely fastened within the device to ensure proper device functionality.

Response to Arguments

11. Applicant's arguments filed 09.05.02 have been fully considered but they are not persuasive. In particular, Examiner notes that McClain et al. (U.S. Patent 4,370,098) disclose a process (and apparatus) for measuring and monitoring motor systems.

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12. Applicant contends that McClain et al. do not teach monitoring internal motor conditions with sensors. The claim language of the pending claims recites "... a method (or apparatus) for measuring and monitoring motor systems"... Examiner notes that a) McClain et al. disclose a process (and apparatus) for measuring and monitoring motor systems and b) Applicants arguments are not congruent with the claim language set forth in the pending claims. In particular, Examiner notes that the claim language does not recite the limitation of: monitoring internal motor conditions with sensors. In view of this, the Examiner concludes that the argument that McClain et al. do not meet the limitations, as set forth in the pending claims is not persuasive, since the limitation of monitoring internal motor conditions with sensors is not positively recited in any of the pending claims. Furthermore, Examiner notes that further arguments related to real time monitoring of internal motor temperatures under continually changing dynamic conditions likewise is not persuasive, since these features are not positively recited in any of the pending claims.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (703) 306-0473. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308 4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Courtney Thomas



DAVID V. BRUCE
PRIMARY EXAMINER